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ABSTRACT

Studied for its effects on the reading fluency of elementary school students, R. C. Heckleman's Neurological Impress Method has proved an inexpensive but effective method for motivating low achievement readers. Twenty-six subjects from grades 2 to 6 practiced reading in unison with a tutor during four 15-minute sessions a week. During the sessions with this experimental group, the tutor emphasized reading at a normal rate rather than comprehending the text. Once a week the students received a reward session with games, art activities, and recess time for accumulating four "attentive" points. Results from the Slosson Oral Reading Test (SORT), administered as a pretest and again after 5 months of the program to the experimental subjects and to 26 subjects from grades 2 to 6 in the control schools, revealed no significant difference between oral reading gains in the two groups, but when a t-test was applied to the experimental subjects' SORT scores, the findings were significant. Furthermore, tutors expressed strong approval of the program and classroom teachers noted a more confident, positive attitude toward reading among subjects. A student attitude survey showed that after the program 83.3% of the experimental subjects felt they read better and 100% said they enjoyed reading more. Records of individual progress indicated that by the end of the program students read more pages per session with more word fluency and confidence. (MM)

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BEHAVIORAL REINFORCEMENT WITHIN A PERCEPTUAL-CONDITIONING PROGRAM OF ORAL READING

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ABSTRACT

"Behavioral Reinforcement Within a Perceptual-Conditioning Program of Oral Reading"

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The purpose of this study is to improve the word fluency in the reading act in a select population of elementary school children who demonstrate a deficiency in this area. A reinforcement schedule was provided for the subjects in the experimental group to increase motivation and word fluency. A perceptual conditioning approach to oral reading was used in the individualized tutoring sessions of the selected students to provide an accurate model of oral reading and the reinforcement of correct word recognition. "Attentiveness" to the task of reading orally was also reinforced. Number of pages covered, attitude toward the program and growth in reading skill was measured and analyzed during the course of this six-month study as well as attitude toward the tutoring sessions.

Behavioral Reinforcement Within a Perceptual-Conditioning Program of Oral Reading

INTRODUCTION

Most educational projects are developed to meet a multiplicity of needs of the school population in our country.

This project was designed to serve these four identified areas of need in the educational system of today.

1. Research is necessary on methods and approaches that will increase reading ability in a low-achieving school population.
2. Programs need to be implemented in the primary and middle schools which will service low-achieving students in the area of reading.
3. There is a need for built-in incentive to modify the reading behavior of the low-achieving school population.
4. There is a need for programs to be functional within the scheduling and budgeting limits of the school situation.

There is a scarcity of reported literature on methods that have been used with a slow learning population. Most methods and approaches have either been researched with a learning disabled population or are remedial programs for groups or classes. The Neurological Impress Method devised by R. C. Heckleman (1967) was selected to be studied for its effectiveness with a low-achieving population.

There is a population of students who are either slow learners, marginally learning-disabled or are very difficult to motivate for any number of reasons. These students rarely qualify for so-called "special education" programs. It was felt that this population of students need

an incentive program which will reinforce the skills necessary for efficient reading. It was also felt that a functional program was needed to aid these students regardless of the etiology of their deficiency. Therefore, causation, other than mental ability, was not assessed.

Along with these established needs, a paramount consideration was the budgetary and scheduling constraints of the school situation. The project had to have a practical approach and existing materials had to be utilized. The tutoring, although it must be one to one, must also be of a short duration. The method of tutoring must be one that para-professionals can master without extensive training. Motivation had to be built into the project along with a reinforcement schedule to insure giving this population of students an environment conducive to success. In this era of cutbacks in educational funding, it was also thought that a program which could be maintained with peer tutoring or volunteers would be an obvious asset.

Finally, this project was necessary to implement a tutorial program in the elementary school which would coordinate with the instruction taking place in the regular classroom.

OBJECTIVES/PURPOSES

The objectives of this project encompass the areas of improving reading ability in a low-achieving population, perceptual conditioning, individualization and providing positive reinforcement. The specific purposes are:

A. Improving Reading Ability

1. Provide an accurate model for oral reading.
2. Reinforce correct word recognition aurally.
3. Improve word fluency in oral reading including phrasing ability which enhances meaning.

B. Perceptual Conditioning

1. Immediate feedback when the word is pronounced correctly.
2. Auditory cueing which allows the student to pronounce an unknown word.
3. Synchronize visual and auditory perceptual input.

C. Individualization

1. Provide one-to-one tutoring situation.
2. Materials on the level of the student.
3. Tutoring material keyed to the level of the classroom instruction or his/her reading group.
4. Student moves at his/her own pace.

D. Provide Positive Reinforcement

1. The reading act itself is reinforced by unison reading.
2. Material is motivating as it is geared to the level of each pupil.
3. Reward system is built into the project for "attentiveness."
4. Reading itself becomes motivational factor as mastery increases.

SUBJECTS

The subjects involved in this study were 26 elementary students in grades two through six in the experimental schools and 26 students in the control schools. Thus, there were 52 subjects in total. They were selected on the basis of the Otis-Lennon Mental Abilities Test and their scores ranged from 70 to 90 on this test.

The population of the experimental schools was 220 students in all. They were located in rural areas under the supervision of the same principal. One of the schools had split grades.

The control schools housed 250 students and were located in an urban area. The two control schools were both supervised by the same principal and one of the schools contained split grades.

APPARATUS

The Neurological Impress Method was used as the apparatus in this study. A description of this method is as follows:

1. The student reads in unison with the tutor.
2. Initially, sentences and paragraphs are read in unison with the tutor several times to establish a fluent, normal reading pattern.
3. No attention is given to the material.
4. The main objective is to cover as many pages of material without long pauses as the student can read without becoming tired.
5. At times, the tutor's voice is louder and slightly faster than the student's voice.

6. As the student becomes more capable of taking a leadership role in the oral reading, the tutor lowers his or her voice and lags slightly behind the student's reading.
7. If the student falters, the tutor increases the volume and speed of his or her reading.
8. The tutor sits slightly to the back and side of the pupil.
9. At first, the tutor accompanies the reading with a smooth, continuous motion of his or her index finger under the words being read.
10. Later, the student uses the finger to accompany the reading.
11. Students are told not to concentrate on individual words.
12. Students are to say the words as best they can without even thinking that they are reading.
13. No concern is given to comprehension, only to the flow of the reading being done. (This method is helpful to phonic bound students.)
14. Instruction is begun at the independent reading level with easy-to-read materials to gain confidence and to learn the procedure.
15. If the child experiences a great deal of difficulty on a sentence and makes errors, the sentence or phrase is reread until the child is reading without errors. Then the child reads it alone.

PROCEDURE

Neurological Impress is sometimes referred to as echo reading.

Heckleman theorized that current reading approaches allow a student to make mistakes when reading. These mistakes can become learned and are not easily corrected. Heckleman hypothesized that if the student was exposed to accurate fluid reading patterns, the correct reading patterns would become deeply "impressed" and supplant the previous incorrect patterns (Tierney, Dishner & Readance, 1980).

The research also shows that after seven to 12 hours, there is often a significant rise in achievement by the reader.

There are some reading professionals that raise legitimate questions about ignoring the thinking skills that are involved in the reading act. That point is recognized, but it is also recognized that when the reading level is low, you cannot work with comprehension adequately within the reading process. Some authorities today recommend a sight word repertoire of 250 words before reading instruction is begun. Some students are nowhere near that level.

To accommodate the comprehension component, an adaptation of the Impress method was made. Instead of reading as rapidly as recommended, the leader reads with normal phrasing. Since the materials used in the tutoring are also used in the classroom, comprehension instruction does become part of the student's instruction.

The Neurological Impress Method was used with all of the students in the experimental group at both schools. The program was operated during the 1981-82 school term. Each child who met the selection criteria attended a 15-minute session for four days a week. On the fifth day, the child was given a reward session for accumulating four "attentive" points. Games, art activities, stickers, television

programs and extra recesses are examples of the activities that were used in the reward sessions. The art supervisor visited the schools and helped to plan the art sessions.

The tutors worked with the subjects in grades two through six for the duration of this project. In the previous years, these same tutors had only worked with first grade children using a programmed linguistic reading series. The Title I guidelines changed for the 1981-82 school year and these Title I tutors were now faced with an older group of students since first grade was eliminated from their program. The idea of using a behavior modification program with the subjects in this study was thus appealing to the tutors in this new situation.

The tutoring sessions were conducted in a small room in the building adapted for this purpose. There were three paid Title I tutors and one volunteer tutor who conducted the sessions. All sessions were held on a one-to-one basis.

The tutor consulted with the classroom teacher concerning the placement and level of the materials that the students would use during the sessions. Generally, the levels were slightly lower than the classroom materials with which the children worked during their reading classes. This was done during the beginning tutoring sessions so that the children would be successful and earn points easily. As the child was more able to master the methods, the materials became more difficult.

In previous studies concerning the Neurological Impress Method, library books had been used as the reading materials with the students involved in these studies. For this study, graded basal readers were used because these books were readily available and because it was

easy for the tutor and the teacher to determine the level of the materials. The classroom teacher used the Macmillan Series R with the students in the regular reading classes and the tutors used the Harper Row Series in the tutoring sessions. However, one day a week, the tutor reviewed with the subjects the story that had been read in the classroom previously that week using the Neurological Impress Method.

Before beginning the tutoring sessions, both the tutors and the teachers were given in-service training concerning the Neurological Impress Method and the reward system.

DATA COLLECTION AND ANALYSIS

The Otis-Lennon Mental Abilities Test was administered to all pupils in both the experimental and the control schools. Those children who scored in the 70 to 90 range in I.Q. and who were in grades two through six were selected for a matched pair statistical design.

The Slosson Oral Reading Test (S.O.R.T.) was administered to all subjects as a pretest and as a guide for placement in reading materials. Informal teacher assessment of pupil progress was also used on the subjects selected in the experimental schools. The S.O.R.T. was administered five months later.

During the first month of the study, the tutors were given an informal questionnaire concerning their assessment of the program. They were also given the same questionnaire five months later.

The teachers were given a needs assessment before the project was begun. The teachers reported that they wished to have an oral reading approach used to teach the children selected for the program. The

teachers were given a commentary sheet six months later.

At the beginning of the sixth month, the subjects were given the Semantic Differential Attitudinal Survey (an attitudinal questionnaire) in the experimental schools to assess their attitudes toward the sessions. A cross tabulation of achievement and attitude was applied to the results to determine the significance of the responses.

A record was kept of the number of pages read per child per session. A comparison was made of the number of pages covered during each four-day session. A graph comparison was compiled.

RESULTS AND CONCLUSIONS

The results appear to indicate that the apparatus for the two experimental schools is analogous to the results of traditional instruction in the two control schools. However, the attitudinal assessment indicated changes in behavior in the experimental schools.

Slosson Oral Reading Test. An analysis of variance for gain scores in both the experimental and control schools indicated that there was no statistical difference in mean gain. On the Slosson Oral Reading Test (S.O.R.T.), the mean gain for both the experimental and control schools was 7.12 months. A less than five-month gain was expected since the subjects identified were between a 70 and 90 I.Q. on the Otis Lennon Mental Abilities Test and duration of instruction was six months.

When a T-test was applied to the mean gain on the S.O.R.T. scores of the experimental schools, the results were significant ($p > .001$). An Individualized Criterion Preference Test was also administered

to the experimental school population at the beginning of the study and again at the end of the seventh-month period. The scores were translated into mean gain and a T-test was applied to the results. The results were also significant ($p < .001$). This criterion reference test measured other areas of reading such as phonetic skills and comprehension in addition to vocabulary. It is interesting to note that according to these test results, there was a carry-over into other areas of reading as a consequence of the NIM tutoring sessions.

Tutor Assessment. On the tutor assessment, which was a questionnaire administered during the first month of the study, all items except number six have checked yes. The responses of the general survey indicated tutor and student endorsement of the apparatus. In the survey administered in the last month of the study, all items were checked yes.

Needs Assessment. The commentary sheets completed by the classroom teacher indicated the following observations on student behavior change:

1. Increased self confidence in the reading act in the classroom.
2. Comprehension skills appeared more developed.
3. Exhibited change in positive attitude towards reading.
4. Oral reading skills appeared more influent.

The Semantic Differential of Attitudinal Survey. Those students who attained a mean gain of between 0 to nine months on the S.O.R.T. illustrated the following results:

1. 83.33% of the subjects reflected that they thought they read

better in the classroom.

2. 56% of the subjects reflected that they thought their teachers think they are reading better in the classroom.
3. 67% of the subjects reflected that they thought their tutors think that they are reading better.
4. 83.33% of the subjects reflected that it is easier for them to work in their workbooks.
5. 89% of the subjects reflected that they enjoy reading orally with their tutor.
6. 100% of the subjects reflected that they enjoy reading more this year than last year.
7. 50% of the subjects reflected that they would like to be in the program next year.
8. 94.44% of the subjects reflected that they enjoyed the reward day.
9. 100% of the subjects reflected that they enjoyed the activities on reward day.
10. 56% of the subjects reflected that they thought their friends would like to be in the program.

Record of Number of Pages Covered. A computer graph of the number of pages read in four day sessions was developed for each individual student. A cumulative graph was also developed by computer. The peaks and valleys indicated different variables present such as tutoring done before and after holidays and other interruptions during the school year.

Minimum number of pages covered and maximum number of pages covered were indicated on the cumulative graph. The graph of the learning sessions for the primary children indicated that they were reading between five to 10 pages per session. During the final week, the same children were reading between 15 and 20 pages per session.

The graph of the beginning sessions for the intermediate children indicated that they were reading between 10 to 15 pages per session at the end of the experimental period; the same children were reading between 15 to 20 pages per session.

Thus, the children were reading more pages per session with more word fluency and confidence in reading ability than when the project was first begun.

References

Arnold, Richard D. A comparison of the neurological impress method, the language experience approach, and classroom teaching for children with reading disabilities. Final Report. Washington, DC: National Center for Educational Research and Development, 1972 (ED073428).

Arnold, Richard D. Neurological impress—good or bad. Paper presented at the annual meeting of the International Reading Association. Indianapolis: September 29-October 1, 1977.

Cook, Jimmie E. The effect of neurological impress on reading-disabled children with auditory perception impairments. Paper presented at the annual meeting of the College Reading Association. Miami: October, 1976.

Embry, A. A study on the effectiveness of the neurological impress method as a remedial reading technique. Unpublished Master's thesis. Ellenburg, Washington: Washington State College, 1968.

Gardner, Charles. Experimental use of the "impress method of reading habilitation." Sacramento, California: California State Department of Education, 1966 (ED003838).

Gawarkiewicz, Patricia. An impress method of reading instruction. Master's thesis. New Jersey, Rutgers University, 1972 (ED064699).

Gibbs, Vanita & Proctoik, Susan. Reading together: An experiment with the neurological impress method. Contemporary Education, 1977, 48, 156-157.

Heckelman, R. G. A neurological impress method of remedial reading

instruction. Academic Therapy, 1969, 4, 277-282.

Hollingsworth, Paul M. An experiment with the impress method of teaching reading. Reading Teacher, 1970, 24, 112-114.

Hollingsworth, Paul M. An experimental approach to the impress method of teaching reading. Reading Teacher, 1978, 31, 624-626.

Jordan, W. C. Prime-O-Tec: The new reading method. Academic Therapy, 1967, 2, 248-250.

Langford, Kenneth. An examination of impress technique in remedial reading. Academic Therapy, 1974, 9, 309-319.

Miller, Marion Z. The notebook: Remediation by neurological impress. Academic Therapy, 1969, 4, 313-314.

Monteith, Mary K. ERIC/RCS: Taped books and reading materials. Journal of Reading, 1978, 21, 554-557.

Swartwout, J. Baxter. Sound-symbol association techniques. Academic Therapy, 1973, 9, 61-70.

Tierney, R. J., Dishner, John E. & Readence, Ernest. Reading strategies and practices: A guide for improving instruction. Boston: Allyn and Bacon, 1980, 139.

Trela, T. M. Fourteen remedial reading methods. Belmont, CA: Lear/Siegler/Feron, 1967, 608.